

COASTAL CONSERVANCY

Staff Recommendation

June 16, 2005

KLAMATH RIVER SEDIMENT STUDY

File No. 05-050

Project Manager: Michael Bowen

RECOMMENDED ACTION: Authorization to disburse up to \$350,000 to study the sediment deposits located behind Klamath River dams, and to obtain additional information needed to evaluate relicensing alternatives for the Klamath River Project.

LOCATION: Klamath River dam sites (Exhibit 1).

PROGRAM CATEGORY: Resource Enhancement

EXHIBITS

Exhibit 1: Project Location and Site Map

Exhibit 2: Letters of support

RESOLUTION AND FINDINGS:

Staff recommends that the State Coastal Conservancy adopt the following Resolution pursuant to Sections 31257 of the Public Resources Code:

"The State Coastal Conservancy hereby authorizes disbursement of up to three hundred fifty thousand dollars (\$350,000) to study deposits behind Klamath River dams, and to obtain additional information needed to evaluate relicensing alternatives for the Klamath River Project."

Staff further recommends that the Conservancy adopt the following findings:

"Based on the accompanying staff report and attached exhibits, the State Coastal Conservancy hereby finds that:

1. The proposed authorization is consistent with Chapter 5.5 (Section 31220) of Division 21 of the Public Resource Code regarding the improvement and protection of coastal and marine water quality and habitats.

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2. The proposed authorization is consistent with Chapter 6 (Section 31251 *et. seq.*) of Division 21 of the Public Resource Code regarding the enhancement of coastal resources.
 3. The proposed authorization is consistent with the Project Selection Criteria and Guidelines adopted by the Conservancy on January 25, 2001.”
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PROJECT SUMMARY:

Staff requests authorization to obtain services necessary to analyze sediment deposits located behind Klamath River dams, and additional information needed for the purpose of evaluating relicensing alternatives for the Klamath River Project. The purpose of this study is to assist with current efforts to thoroughly assess the risks and benefits associated with the possible decommissioning of the Klamath River Project, a hydroelectric development comprised of seven mainstem Klamath dams and one tributary dam, all of which are located on the upper Klamath River.

The Klamath River Project is currently the subject of a relicensing proceeding before the Federal Energy Regulatory Commission (“FERC”). PacifiCorp owns and operates the Project under a single license issued in 1956 by the Federal Power Authority. The 50-year license expires on March 1, 2006. PacifiCorp has filed a standard application for relicensing with FERC that will be considered and analyzed in an environmental impact statement (“EIS”) under the National Environmental Policy Act due in draft form in June, 2006. The environmental review will take into consideration a variety of project alternatives including the addition of fishways at the dams and decommissioning of the project altogether. As part of the relicensing process, PacifiCorp has hosted a stakeholders forum to discuss project management alternatives, including the installation of fishways and decommissioning of the project.

However, the consideration of alternatives is hampered by the lack of a clear understanding of the nature of the sediment found behind the dams, and the clear understanding of alternatives to the current operating regime of the Klamath River Project. While the quantity of sediment is generally known, the particle size and composition of the sediment is not as well understood. These factors would significantly affect possible water quality impacts of various alternatives, as well as costs associated with alterations to the existing infrastructure of the Klamath River Project.

This authorization would expedite the collection of information essential to the development of management recommendations for the Klamath River, recommendations consistent with the recovery of habitat for anadromous fish and other aquatic species found in coastal watersheds.

If this authorization is approved, the Conservancy and the stakeholder forum will obtain information that is essential to the consideration of management alternatives for the Klamath River dams.

Site Description: The Project is located on the Upper Klamath River in north-central California. The Upper Klamath Basin includes the headwaters in south-central Oregon and north-central California, and contains the US Bureau of Reclamation's (BOR)

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Klamath Project Area. The Lower Klamath Basin includes the mouth of the Klamath River in the northwest coast region of California. The Klamath Basin is further divided into sub-basins, as shown in Exhibit 1.

The Upper Klamath Basin consists of the six hydrologic sub-basins that occur above the Iron Gate dam, and are included in the BOR's Klamath Project. It includes the Williamson, Sprague, Upper Klamath Lake, Lost, Butte and Upper Klamath (East) sub-basins. The Upper Klamath Basin is located partially in Oregon, and partially in California, in two counties: Siskiyou and Modoc.

The Lower Klamath Basin consists of the six hydrologic sub-basins that occur below Iron Gate, plus the West section of the Upper Klamath sub-basin. It includes the Shasta, Scott, Lower Klamath, Salmon, Trinity, South Fork Trinity, and the Upper Klamath (West) sub-basins. The Lower Klamath Basin flows through the California counties of Trinity, Humboldt, and Del Norte.

The Klamath basin is 10,040,354 acres, approximately half of which flows through California to its confluence with the Pacific Ocean at the town of Klamath.

Project History: The Conservancy has an extensive history of involvement in the protection and enhancement of habitat and fishery resources in the Klamath River watershed. While Conservancy efforts have primarily been limited to lower watershed enhancement efforts, the Conservancy and other participants share a vision for the increase and enhancement of Klamath River habitat, be it in the lower or upper basin of the Klamath River.

In the early 1990's, the California State Coastal Conservancy began working with Simpson Timber Company (now "Green Diamond"), the Yurok Tribe, and other entities to build the foundation for a common effort in fisheries and watershed restoration for Lower Klamath River tributaries.

A working group called the Lower Klamath Restoration Partnership was formed in 1995 by members of the Yurok Tribe, Simpson, the Conservancy, and the Northern California Indian Development Council. This group sought to coordinate watershed restoration efforts, and achieve three goals concurrently: (1) improve the health of the Klamath River and its tributaries; (2) improve the health of the anadromous fishery, and; (3) train unemployed tribal members to become experts in the new and growing field of watershed restoration.

The Conservancy funded a study in 1995 that led to the development and publication of the *Background Report and Strategic Workplan for Watershed Restoration Planning: Lower Klamath River, California*. The report confirmed that the main cause of impaired habitat in the tributaries was sedimentation resulting particularly from intensive logging and unregulated road building on unstable slopes from the 1950's through the 1970s.

Concurrent with the development of these reports, an upslope road erosion potential inventory for McGarvey Creek was conducted in 1997 as part of the Yurok Tribe's Watershed Restoration Program. The report and its database identified, mapped and inventoried 63 miles of active and abandoned logging roads, and 4.5 miles of public

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highway for existing and potential erosion control treatment. The report identified and prioritized for treatment 408 sites, and revealed the potential, future loss of 234,900 cubic yards of sediment, and the delivery of nearly 164,800 cubic yards of sediment to McGarvey Creek and its tributary stream channels.

Funded in part by the Conservancy and others, the Tribe conducted a Watershed Restoration Training and Implementation Program within the McGarvey and Ah Pah Creek drainage basins from June through October, 1998. This was the initial phase of a projected multi-year restoration effort intended to remediate man-caused sediment sources from 30 tributary sub-basins within the lower Klamath River Basin.

With Conservancy funds, the Yurok Tribal Fisheries Program completed the *McGarvey/Ah Pah Watershed Restoration Training and Implementation Final Report* in 1998, and the *Lower Klamath River Sub-Basin Watershed Restoration Plan* in April, 2000. These documents outlined the training and implementation efforts, prioritized future restoration activities for the sub-basin, and identified tributaries where the activities would be implemented.

The Conservancy awarded a grant of \$600,000 to continue McGarvey Creek enhancement efforts on June 4, 2003. Every road in the McGarvey Creek watershed was assessed for potential erosion and future sediment delivery, a prioritized list of road work, along with fisheries and habitat enhancement, monitoring, and assessments was developed in preparation for a phased approach to watershed restoration and aquatic resource recovery, and the Tribe has nearly completed its enhancement efforts in the McGarvey Creek watershed.

Enhancement of lower Klamath river tributaries continues apace, ensuring that these streams provide adequate and improving habitat for salmon, steelhead, and other aquatic resources. However, these streams are unable to compensate for the effects of the operation of the Klamath River Project, a series of facilities that has substantially affected available habitat in the watershed, and which may have contributed to conditions leading to the outbreak of diseases, such as that which decimated an estimated 35,000 salmon and steelhead, including at least 300 endangered Coho salmon, in September, 2002.

Concurrent with the aforementioned erosion control work, Pacificorp filed with the FERC an application to renew its license for the Klamath River Project. The Yurok Tribe, the Karuk Tribe, commercial fishing, environmental, agricultural and many other interests joined a mediated settlement process to discuss the future of the Klamath River Project, and what opportunities existed to increase access for salmon to rendered inaccessible following construction of the Klamath River Project. That dialogue continues, and all parties involved have expressed interest in exploring options for providing access to this historic habitat above the Klamath River Project.

The historic population of salmon and steelhead on the Klamath River prior to the construction of the Klamath River project is legendary. One widely accepted estimate put the historic range of salmon abundance for the Klamath-Trinity River system at 650,000

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to one-million fish. These runs contributed to substantial commercial, recreational, subsistence, and Tribal harvest.

Yurok and Karuk People have inhabited the lands of, and sustained themselves upon the resources of the Klamath River for centuries. Much of the Tribe's culture is based upon the Klamath River and its associated fish populations. Declines in historic levels of fish stocks, including the aforementioned fish kill, have at times reduced the Tribe's sustenance fishery to a largely ceremonial fishery. The commercial salmon fishery has been decimated by harvest limits governed by management proscriptions designed to protect weakened stocks on the Klamath River system. The proposed sediment study will provide an important but missing piece of information necessary to a thorough analysis of project alternatives that may provide a plan to further enhance and restore the Klamath River system's once legendary salmon runs.

PROJECT FINANCING:

Coastal Conservancy	\$350,000
National Marine Fisheries Service (in kind)	50,000
Total Project Cost	\$400,000

Conservancy funding for the proposed authorization is expected to come from Proposition 50 funds. Proposition 50 authorizes the Conservancy's use of these funds for the purpose of protecting coastal watersheds through projects undertaken pursuant to the Conservancy's enabling legislation (Division 21 of the Public Resources Code) to acquire, restore or protect water and land resources (Water Code Section 79570). Funds may also be used for planning and permitting associated with projects of this type. The sediment analysis of the Klamath River dams will ensure achievement of these objectives consistent with Division 21, as discussed in detail below, under the heading "Consistency with Conservancy's Enabling Legislation".

CONSISTENCY WITH CONSERVANCY'S ENABLING LEGISLATION:

The authorization is proposed under Chapters 5.5 (coastal and marine resource protection, §31220) and 6 (coastal resource enhancement, §§31251 et seq.) of Division 21 of the Public Resources Code.

Within Chapter 5.5, §31220(a) allows the Conservancy to "undertake watershed restoration projects or award grants" consistent with §31220(b), to improve coastal water quality and habitats.

Consistent with §31220(b)(2), the proposed authorization would help to "[p]rotect[] or restore[] fish and wildlife habitat within coastal watersheds and coastal watersheds" by providing information to help ensure that any proposed recovery actions will not imperil existing fishery resources in the Klamath River watershed.

Consistent with §31220(b)(4), the proposed authorization would help "reduce[] unnatural erosion and sedimentation of coastal watersheds or contribute[] to the reestablishment of natural erosion and sediment cycles" by attempting to ensure that fishway construction or decommissioning plans for the Klamath River Project do not

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threaten downstream interests with the potential deposit of sediments.

The proposed project is also undertaken under Chapter 6, as follows:

Under §31251.2(a), “[i]n order to enhance the natural or scenic character of coastal resources within the coastal zone, the Conservancy may undertake a project or award a grant . . . to enhance a watershed resource that is partly outside of the coastal zone. . . .” Consistent with this section, the parties engaged in the relicensing of the Klamath River Project, which is located entirely outside of the coastal zone, require Conservancy assistance to determine the risks and benefits to coastal resources of various alternative management proposals for the Klamath River Project, one of which is the decommissioning of dams on the Klamath River. This assistance was sought in order to carefully evaluate a series of alternatives intended to benefit salmon populations known to travel many miles upstream of the coastal zone boundary in order to fulfill their life history patterns. Indeed, salmon depend on unimpeded access to high quality habitat both within and outside of the coastal zone in order to survive. If salmon and other highly prized aquatic resources are to be maintained and restored to historic levels, funding must be provided to improve salmon habitat both within and outside the coastal zone. This section also requires the support of the California Department of Fish and Game. The Department is highly supportive of this authorization as exhibited in their letter of support included in Exhibit 4.

Under §31253, “[t]he Conservancy may provide up to the total of the cost of any coastal resource enhancement project. . . .” Consistent with this section, the proposed contribution, intended solely for a sediment analysis and associated work, represents a small component of the overall cost of relicensing and evaluation of project management alternatives.

The proposed authorization is consistent with the Del Norte and Humboldt Local Coastal Programs as described in the Consistency with Local Coastal Program Policies below.

The proposed authorization is also consistent with §31111, which allows the Conservancy to award grants for plans and feasibility studies in implementing Division 21.

CONSISTENCY WITH CONSERVANCY'S STRATEGIC PLAN GOAL(S) & OBJECTIVE(S):

Consistent with **Goal 6 Objective A** of the Conservancy’s Strategic Plan, the proposed project will contribute to the development of 70 plans and projects that preserve and restore coastal watersheds and create river parkways.

Consistent with **Goal 6 Objective A** of the Conservancy’s Strategic Plan, the proposed project, the proposed project will leverage the results of the recently completed study of barriers to fish passage, through the implementation of projects to improve habitat for anadromous fish. The proposed authorization will enable the Conservancy, in concert with the participants in the relicensing proceeding, explore possibilities to increase manifold available habitat for aquatic species, notably salmon, by removing instream barriers to their free migration.

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CONSISTENCY WITH CONSERVANCY'S PROJECT SELECTION CRITERIA & GUIDELINES:

The proposed project is consistent with the Conservancy's Project Selection Criteria and Guidelines adopted January 24, 2001, in the following respects:

Required Criteria

1. **Promotion of the Conservancy's statutory programs and purposes:** See the "Consistency with Conservancy's Enabling Legislation" section above.
2. **Consistency with purposes of the funding source:** See the "Project Financing" section above.
3. **Support of the public:** Supporters of this authorization include the Congressman Mike Thompson, Senator Wes Chesbro, Assemblymember Patty Berg, the Counties of Humboldt and Trinity, the National Marine Fisheries Service, the Secretary of Resources, the Chair of the State Water Resources Control Board, the Department of Fish and Game, the Yurok Tribe, Trout Unlimited, American Rivers, the Pacific Coast Federation of Fishermen Association, and others. Letters of support are included in Exhibit 4.
4. **Location:** The proposed authorization will consist of sediment analyses conducted outside of the coastal zone, primarily in Siskiyou County. Decisions made as a result of the information collected are anticipated to help improve fish passage within coastal watersheds for anadromous fish and other aquatic resources, and thereby benefit species that rely on both coastal and upstream habitats for their survival.
5. **Need:** The Klamath River was once the Pacific Coast's third largest producer of salmon and steelhead, rivaled only by the Columbia and the Sacramento-San Joaquin River systems in that regard. However, existing barriers to fish passage obstruct recovery within the full geographic range of species either listed or potentially listed under the federal and state endangered species acts. The provision of fish passage over, or the decommissioning of the Klamath River Project would provide anadromous salmonids and other aquatic organisms access to spawning and rearing sites in upper portions of the watersheds. Although Pacificorp agrees that the studies are an essential part of the discussion of future management of the project, they decline to pay for the study.
6. **Greater-than-local interest:** The public trust value of California's salmon and steelhead populations is of great interest to all, and is a natural legacy too precious to lose. Moreover, sport and commercial fishing provides an important economic benefit to the State of California.

Additional Criteria

7. **Urgency:** Recovery of salmon and steelhead populations listed under the federal or state Endangered Species Acts will only occur if the concerted removal of barriers to fish passage, and subsequent recolonization of historic range, proceeds expeditiously.

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As populations of anadromous salmonids decline statewide, the need is urgent to recover populations by widening the available range of the species by restoring historically accessible habitat. Coho salmon are currently at six to 15% of their abundance during the 1940s. Given this decline, and in light of the State Recovery Strategy's primary objective of returning Coho salmon to a level of sustained viability, while protecting their genetic integrity, enhancement projects with a high potential for recovering local populations of coho are a high State priority.

8. **Resolution of more than one issue:** The issue to be resolved by this authorization is the nature and composition of the sediment behind the dams. This and associated information will help inform a serious consideration of project management alternatives for the Klamath River Project, including either the provision of fishways at the dams, or decommissioning of the Project altogether.
9. **Leverage:** See the "Project Financing" section above.
11. **Innovation:** The current effort to engage in a creative relicensing process that leaves all future management options on the table provides for a more informed and less acrimonious relicensing process than the traditional relicensing process. The Conservancy can assist this effort through the provision of accurate and substantive information related to the evaluated alternatives.
12. **Readiness:** Upon Conservancy approval, staff will obtain the services necessary to conduct this work. The participants in the negotiated settlement process convened by PacifiCorp have all expressed their desire to receive the information as soon as practicable.
13. **Realization of prior Conservancy goals:** The Conservancy's completion of the report "Assessment of Barriers to Fish Passage in California's Coastal Watersheds" signals the agency's focus on and commitment to the improvement of fish passage in coastal watersheds. Having identified numerous barriers to fish passage in this report, and having supported several fish passage improvement projects already, this proposal provides a convenient means of expanding the Conservancy's fish passage efforts, and expediting the development of a greater number of projects in the near future.
15. **Cooperation:** Many have expressed support for this authorization, and the members of the settlement discussions are prepared to assist the Conservancy in any way.

CONSISTENCY WITH LOCAL COASTAL PROGRAM POLICIES:

The proposed authorization will include sites located outside of the coastal zone, but will pertain to a proceeding that affects at least five northern California counties, two of which have certified Local Coastal Programs (LCPs), and three of which are outside of the coastal zone.

Work sites will be located outside of the coastal zone. However, the aquatic resources and habitat quality of stream channels within and outside of the coastal zone boundaries are inextricably linked. Barriers to fish passage affect coastal resources regardless of barrier location within the watershed. The anadromous fish populations that spend part of

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their life history within the coastal zone reside for extended periods outside of the coastal zone, and therefore depend upon free passage within a watershed throughout their life history.

The proposed authorization is consistent with the two certified LCPs as follows:

Del Norte County

The authorization is consistent with the relevant portions of the Del Norte County Local Coastal Program (LCP), which was certified by the Coastal Commission on October 12, 1983.

It is due to the diversity in life history patterns of anadromous fish species that the Del Norte LCP acknowledges the importance of coastal streams and riparian vegetation systems as Sensitive Coastal Habitat, necessary to both the aquatic life and the quality of water courses. Under the LCP, Chapter VI, the following provisions are made:

“The County shall maintain all existing species of fish, wildlife, and vegetation for their economic, intrinsic and ecological values as well as providing adequate protection of rare and endangered species.” (App., p. 55)

“The County should establish riparian corridors along local streams, creeks, and sloughs to maintain their aesthetic appeal, wildlife habitat, control of erosion. . . .” (App., p. 56)

“The County encourages programs (*e.g.*, fish hatcheries, habitat rehabilitation) designed to improve the quality of coastal fisheries and other marine resources.” (App., p. 57)

“All surface and subsurface waters shall be maintained at the highest level of quality to insure the safety of public health and the biological productivity of coastal waters.” (App., p. 58)

Therefore, this recommendation’s goal of improving anadromous fish habitat by developing information to assist with the design of fishways or alternatively the removal of barriers to fish passage, and providing access to historic habitat, thereby maintaining and enhancing the aquatic resources of the county, is consistent with the LCP.

Humboldt County

The authorization is consistent with the relevant portions of the Humboldt County General Plan Volume II, North Coast Area Plan of the Humboldt County Local Coastal Program (LCP), which was partially certified by the Coastal Commission on January 12, 1982, and amended thereafter on various occasions, and which states:

“Environmentally sensitive habitat areas shall be protected against any significant disruption of habitat values, and only uses dependent on such resources shall be allowed within such areas.” (LCP, 3-40 (a))

“Development in areas adjacent to environmentally sensitive habitat areas and parks and recreation areas shall be sited and designed to prevent impacts which

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would significantly degrade such areas, and shall be compatible with the continuance of such habitat areas.” (LCP, 3-40(b))

“Marine resources shall be maintained, enhanced, and, where feasible, restored. Special consideration shall be given to areas and species of special biological or economic significance.” (LCP, Chpt. 3, p. 27, Section G)

“The biological productivity and the quality of coastal waters, streams, wetlands...appropriate to maintain optimum populations of marine organisms...shall be maintained and, where feasible, restored through, among other means, minimizing adverse effects of wastewater discharges and entrainment, controlling runoff...and minimizing alteration of natural streams.” (LCP, Chpt. 3, p. 27, Section G)

Because the proposed authorization will help prepare for projects designed to restore natural geomorphologic processes and open up previously unavailable habitat; therefore the proposed authorization is entirely consistent with the LCP policies stated above.

COMPLIANCE WITH CEQA:

Preparation of the sediment study and corollary information collection involves only data gathering, planning, and feasibility analyses for possible future actions and is thus statutorily exempt from the provisions of the California Environmental Quality Act (CEQA) pursuant to 14 Cal. Code of Regulations Section 15262.

The authorization is also exempt under §15306 which exempts basic data collection, research, experimental management, and resource evaluation activities which do not result in a serious or major disturbance to an environmental resource. These may be strictly for information gathering purposes, or as part of a study leading to an action which a public agency has not yet approved, adopted, or funded.

Staff will file a Notice of Exemption upon approval.